

## Supplementary

Table S1: Assessing NDVI *C* against control points collected in the field.

Land cover	NDVI	NDVI <i>C</i>	Fixed <i>C</i>
grasslands	0.48	0.16	0.12
bare/degraded	0.23	0.56	1
grasslands	0.54	0.09	0.12
bare/degraded	0.44	0.21	1
grasslands	0.54	0.10	0.12
grasslands	0.46	0.19	0.12
bare/degraded	0.37	0.32	1
low shrub	0.49	0.14	0.013
bare/degraded	0.22	0.57	1
wetlands	0.57	0.07	0.038
grasslands	0.52	0.12	0.12
open bush	0.59	0.06	0.012
bare/degraded	0.21	0.58	1
plantation	0.65	0.03	0.012
bare/degraded	0.30	0.43	1
bare/degraded	0.18	0.64	1
bare/degraded	0.23	0.55	1
grasslands	0.49	0.14	0.12
low shrub	0.59	0.06	0.013
grasslands	0.55	0.08	0.12
settlements	0.52	0.12	0.1
settlements	0.54	0.10	0.1
settlements	0.62	0.04	0.1
wetlands	0.66	0.02	0.038
wetlands	0.67	0.02	0.038
grasslands	0.48	0.16	0.12
forest/thicket	0.74	0.00	0.009
grasslands	0.58	0.06	0.12
wetlands	0.61	0.05	0.038
grasslands	0.45	0.19	0.12
grasslands	0.54	0.10	0.12
grasslands	0.40	0.26	0.12
bare/degraded	0.34	0.35	1
low shrub	0.56	0.08	0.012
grasslands	0.52	0.12	0.12
low shrub	0.47	0.17	0.012
grasslands	0.63	0.04	0.012
low shrub	0.49	0.15	0.013
bare/degraded	0.37	0.31	1
grasslands	0.54	0.09	0.12
open bush	0.51	0.13	0.012
forest/thicket	0.71	0.01	0.009
cultivated land	0.40	0.26	0.37
settlements	0.38	0.29	0.1
<b>Average</b>	<b>0.49</b>	<b>0.19</b>	<b>0.29</b>

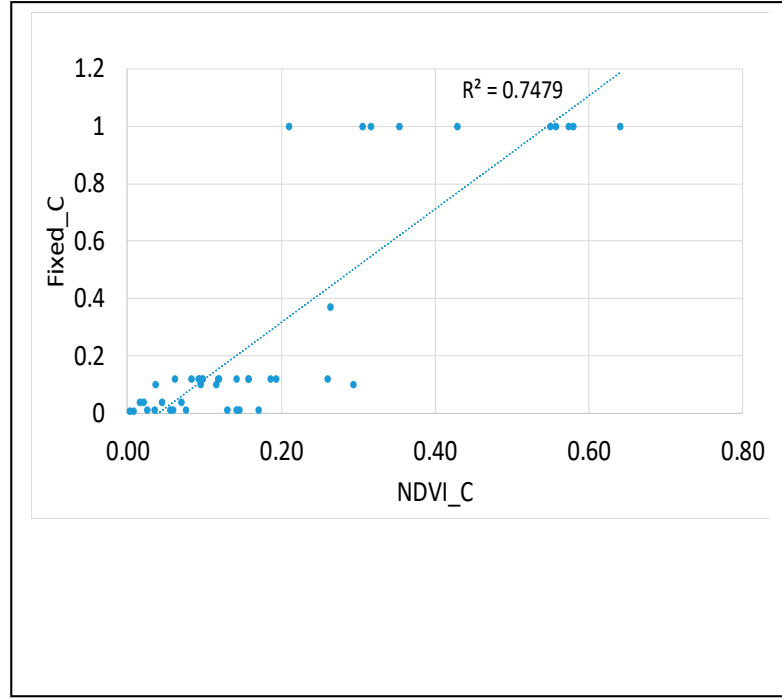


Table S2: The performance of some of the NDVI to *C* conversion methods for use within the study area.

<b>Vegetation class</b>	<b>NDVI</b>	<b>Map (fixed) <i>C</i></b>	<b>Van der Knijff</b>	<b>Colman</b>	<b>Durigon</b>	<b>Sulistiyo<sup>1</sup></b>	<b>Sulistiyo<sup>2</sup></b>	<b>Suriyaprasit</b>	<b>De Jong</b>
Low shrub	0.59	0.013	0.06	-0.009	-0.086	0.149	0.214	0.003	-0.041
Grasslands	0.55	0.12	0.08	-0.005	-0.054	0.173	0.256	0.004	-0.015
Settlements	0.52	0.1	0.12	-0.002	-0.019	0.200	0.312	0.005	0.013
Wetlands	0.66	0.038	0.02	-0.016	-0.158	0.093	0.143	0.002	-0.099
Forest/thicket	0.74	0.009	0.003	-0.024	-0.240	0.030	0.090	0.001	-0.165
<b>Average</b>	<b>0.61</b>	<b>0.056</b>	<b>0.06</b>	<b>-0.011</b>	<b>-0.111</b>	<b>0.129</b>	<b>0.203</b>	<b>0.003</b>	<b>-0.061</b>

Table S3: Average MUSLE factors (including fixed *C*) calculated for the catchments.

### T35C

<b>Factor</b>	<b>Value</b>
<i>LS</i>	6.6
<i>C</i>	0.098
<i>K</i>	0.35
<i>P</i>	0.94

### Tsitsa catchment

<b>Factor</b>	<b>Value</b>
<i>LS</i>	6.22
<i>C</i>	0.12
<i>K</i>	0.33
<i>P</i>	0.96

### Inxu catchment

<b>Factor</b>	<b>Value</b>
<i>LS</i>	6.95
<i>C</i>	0.13
<i>K</i>	0.35
<i>P</i>	0.8